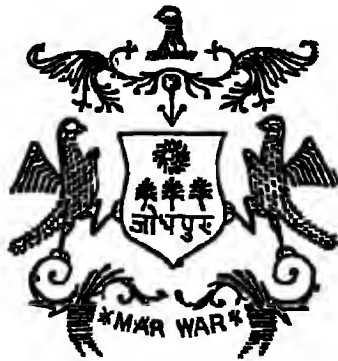


PROGRESS REPORT

ON

FOREST ADMINISTRATION

IN



Jodhpur State, Rajputana,

FOR THE YEAR 1890-91.

BY

LALA DAVEAT RAM LIMBHAT,

Superintendent of Forest Department, Jodhpur:

With a Review by Major W. Loch, Assistant Resident, Western Rajputana States

JODHPUR:
PRINTED AT THE "MAHARAJA STATE" PRESS.
1891.

*Review of the Forest Conservancy Report for 1889-90
by Major W. Loch, Assistant Resident, Western
Rajputana States.—15th December, 1890.*

This being the first year in which an Annual Forest Conservancy Progress Report has been published and issued, it is necessary to state briefly the origin of the Department and how the Forest lands have been acquired.

Origin of the Department.—In November 1884, Mr. Lowrie, late Assistant Conservator of Forests, Ajmere, was deputed to visit and report on the Marwar Forests situated along the Arravelli range. His report showed that the Forests had been shockingly ill treated and neglected, and that it was high time to adopt a conservancy system, or that the Forests would all but in name become extinct. In April 1887, the Marwar Darbar acting on Mr. Lowrie's suggestions, applied to Government for the service of a trained Forest Officer and in February 1888, Mr. Doulat Ram was appointed as Superintendent of Forests to the Marwar State and joined his appointment on the 28th March 1888. During the remainder of the year Mr. Doulat Ram toured through the Forests examining them and making notes which brings us to the date of this Report.

Description and acquisition of Forest lands.—The tract of country which has been placed under Forest Conservancy, omitting the jungles of Raipur and Bagri of which mention will be made hereafter, is a belt of Forest 94 miles long and averaging $8\frac{1}{2}$ miles broad extending from Nand south to Depiwas north, the Forests of Ajmere-Merwara and Udipur marching with it. Commencing from Nand and proceeding in a northerly direction the following towns or villages are situated on the confines of the Forest Tract. Nana, Bhera, Bijapur, Sewari, Sadree, Ganerao, Desuri, Vagol, Kot, Jojawar Sheriari, Saran, Kantalia, Gura Shamaji, Ghura Kalan, Ghura Ram Singh, Ghura Bija-ji-ka, Bagri, Raipur, Depawas. Of these only the towns of Desuri and Sadree and the village of Vagol were Khalsa or Crown lands, the remainder belonging to more or less influential Jagirdars. Attached to the towns and villages are hamlets situated within the Forests and owned or held by the Jagirdars on different tenures. The principle then which has been adopted is, that where hamlets exist as appanages of the larger villages, their revenue has been assessed and other Khalsa villages of equal revenue given in exchange. Where no hamlets exist, compensation on a fixed scale assessed in money has been paid to the Jagirdar to whom it belongs. To prevent the export of timber and fire-wood and the further destruction of the forests, whilst these negotiations were pending, a prohibitive duty on all forest produce exported without a licence from the Forest Department, was levied. At the close of the year little progress in

awarding compensation and exchanging villages had been effected, but at the time of writing (December 1890) nearly all has been settled; in fact nothing remains which will cause future trouble, but this will be fully referred to in the current year's report. The delay in completing these arrangements was not unlooked for, for it must be remembered that, many of these hamlets had been in the possession of the Jagirdars for generations and at first the proposal to exchange them came as a shock. Then again the hamlets were populated altogether by Bheels, Grassiahs, and such like wild men in dealing with whom, the greatest tact was necessary for the word "assessment" was sufficient to disperse them through the jungles. Lastly the Jagirdars books could not altogether be taken as sufficient evidence on which to base an assessment and the produce of two harvests had to be considered before the revenue of each hamlet could be fixed.

Obstruction.—The Thakurs of Raipur and Bagri, through the bad advice of their *kamdars*, on grounds altogether unconnected with their like for, or dislike to the proposed measures obstructed in every way the introduction of Forest rules in their lands. This however, is a temporary difficulty which time will overcome.

Establishment of fire lines, demarcation, record of rights, etc.—The report speaks at length of the demarcation of the Forests, the establishment of fire lines, the record of rights, the establishment engaged, etc, and it is not necessary to recapitulate. All this work seems to be progressing well. In recruiting the Forest guards the services of Mennas have been engaged and by this a political advantage has been gained for employment has been found for a class who lived principally by theft.

Conclusion.—In conclusion it is necessary to bring to notice the excellent services of Kala Chuttur Bhuj, the Superintendent of Land Revenue. The work of assessment and transfer of villages has fallen principally on him and he has carried it through with great perseverance. I would also take this opportunity of bringing to notice the good services of Mr. Doulat Ram and especially the tact he has displayed in dealing with the State officials.

No. 266 of 1890.

FOREST DEPARTMENT, MARWAR.

FROM

LALA DAULAT RAM BIMBHAT,

SUPERINTENDENT OF FORESTS,

Marwar.

TO

MAJOR W. LOCH. ASSISTANT RESIDENT,

WESTERN RAJPUTANA STATES,

Jodhpur.

Dated, Jodhpur, the 27th Decr. 1890

Sir,

I have the honor to submit the Progress Report of Forest Administration in the Marwar State for the year 1889-90.

2. The Report is a brief record of the progress made during the year. As this is the first year that the forest conservancy has been started, no attempt could be made to prepare the Report on the lines laid down in the Forest Code.

I have the honor to be,

Sir,

Your most obedient servant,

DAULAT RAM BIMBHAT,

Superintendent of Forests, Marwar.

PROGRESS REPORT
OF
FOREST ADMINISTRATION
IN THE
MARWAR STATE
FOR
1889-90.

Introduction.

1. Forest conservancy was a subject of very hot discussion in Marwar during the current year, and the Assistant Resident, Western Rajputana States, made several tours along the Aravali Range for the purpose of acquainting the Jagirdars of the manifold benefits that can be derived by preserving the jungles and working them judiciously.

2. The Jagirdar of Dipawas at last applied to the Durbar for permission to place his jungles under the Forest Department, provided that his two villages namely Dipawas and Tonkara were exchanged for other khalsa villages of equal value. This was agreed to and the exchange was arranged. His villages were assessed and the waste lands demarcated by the Forest Officer and the Superintendent of Hawala (Land Revenue).

3. The Jagirdars of Ghanerao and Kantalia followed the example of Dipawas. They submitted similar applications. The former exchanged his villages and received Rs. 500 per annum as compensation for his forests from the Durbar. The villages of the latter were

not assessed, hence the exchange was not effected.

4. Subsequently the Thakurs of Nana, Bahra, Bijapur, Sewari, Kot, Jujawar, Shirinri, Sarun and 4 Gudhas submitted similar applications, some for the exchange of their villages that border on the proposed forest boundary, and the others only to receive compensation for their waste lands. The Jagirdars of Sewari and Sarun received other villages in exchange and compensation for their forests; while the Thakur of Shirinri received only the compensation he had applied for. The cases of other Thakurs are still pending before the Durbar, and when their villages or rather small hamlets situated in the forests are assessed by the Revenue Department, they will receive other villages of equal value plus the compensation for their forests.

5. The Thakurs of Raipur and Bagri opposed the measure to the uttermost and left no stone unturned to induce the other Jagirdars to follow their example.

6. The Thakurs of Pi, Basi, Barantia (Khurd), Sumail, Babra, &c., also applied to the Assistant Resident, Western Rajputana States, later on for a transfer of their forests, but as the Superintendent of Forests had no time to inspect and report thereon, their applications are still pending.

Area.

7. The area of the Forests from Dipawas north to Nana south—with the exception of the forest lands of Raipur and Bagri—computed from the one inch Trigonometrical Survey Maps amounts to 2,10,560 acres, and of the Reserve near Jodhpur 10,240 acres approximately. The total area conserved stand at 2,20,800 acres or 345 square miles. . .

Demarcation.

8. The forests from Dipawas to Nana with the exception above recorded a line about 94 miles long and by average $8\frac{1}{2}$ miles broad have been demarcated on the Marwar side with rubble dry stone pillars $8' \times 8' \times 8'$. A line of permanent masonry pillars already exists along the Marwar-Meywar and Marwar-Merwara boundary hence no further demarcation is required on that side.

9. All cultivated patches of land scattered within forest limits have been demarcated and excluded from the forest.

10. The boundary pillars have a stone slab about 2 feet long in the centre which will bear the serial number of such pillars.

Division of Forests into Ranges and Beats.

11. The forests ^{from} Nana to Dipawas are divided into two Ranges and 24 beats or blocks. The Ranges are named the Sojat Range and the Godhwar Range, after the names of the Pargannas they are situated in. The Jodhpur Reserve forms a separate beat and is attached to the Direction Division.

Establishment.

12. Both the Ranges are for the present put under one Forest Ranger, 28 Forest guards and 3 Head guards. The Jodhpur beat is looked after by one Forester and 4 guards.

13. Considering the area of the forests, the establishment is too weak to protect the forests under their charge. As soon as the services of another trained Ranger can be procured everything, it is hoped, will be placed on sound footing.

Settlement of Rights.

14. The Superintendent of Forests made several tours enquiring into the rights enjoyed by villages in the neighbouring forest lands. As it was very late in the year that the Department assumed proper control over the forests and the most

important work was that of demarcation, very little time remained to record all the rights. Permission was accorded to villages living outside the forests to graze horned cattle, for the time being, in the compartments set aside for them, to cut grass from all the blocks and gather dry fallen wood for their own use. Those who live in hamlets situated within forest limits are allowed temporarily to graze a limited number of goats and sheep.

15. A price list of all kinds of forest produce was prepared in consultation with the Hawala authorities, Choudries and Zemindars of Bahli and Desuri, &c., who agreed to pay at the rates fixed therein. The prices are lower than those charged by the Ajmere-Merwara Forest Department. The list has been signed by the headmen of more than ten principal villages situated near the forest boundary, but as it has not yet been sanctioned by the Council and Musahib Ala, it has not been brought into force.

16. Formerly the villagers had no free rights in the jungle and used to pay for all forest produce in the shape of "Kharla"—a tax embracing grazing fees, right to cut timber, collect firewood, a fee on ploughs, &c., to Jagirdars who have now received compensation in full from the Darbar.

Fire Conservancy.

17. This is a most important work in connection with Forest Conservancy, especially in these forests which are annually set on fire either wilfully or accidentally. After demarcating the forests no time was available to clear the fire-traces as winds blew very high during the months of March, April and May and it was very difficult to keep fire under control. However, fire-lines which seemed the most convenient and economical to

bring out the desired effect were proposed and marked out. Many of the forest paths, streams and ravines were adopted as firelines and compartment boundaries. There is little fear of fire from the direction of the Marwar Government forest, as a sufficiently broad line is cleared on the border. There were no combustible materials in the forests, the grass was grazed down by cattle and eaten up by the swarms of locusts that visited the country last winter. The greatest danger lies in the Godhwar Range where no fireline exists between Meywar and Marwar. The forests in the former State are always on fire during the hot and dry months and there is a good deal of grass and other inflammable debris to feed the flames. An extra establishment of Fire guards will be engaged to keep down the fire.

Cultural Operations.

18. Though it is a very expensive measure to maintain nurseries and plantations in such a dry country, yet it is essential for the improvement of forests. Protection is a good thing in itself but cannot accomplish everything alone. There is no doubt that birds and winds do a great deal towards diffusion of the seed even to a great distance, but still their action is limited. To fill up the blanks and introduce some good species in the forest, we must have recourse to the introduction of trees. Hence the grounds for nurseries were marked out in the following Reserves:—

One in the Behra Reserve near Gorla. This will supply plants for the Kana, Behra, Bijapur and Siwari Reserves.

Another at Sadri where we have already a nursery containing a fair number of 500 seedlings. But the ground is not enough to raise a sufficient number.

to meet the demands of the blanks in the Latara, Sadri, Mandigar and Rajpura Reserves.

The third nursery was proposed in the Kot Reserve to supply the seedlings for the Desuri, Samcwar, Ganthi, Vagol, Kot, Jujawar and Shiriri Reserves.

The fourth nursery will be established in the Gudha Samajes Reserve. This would supply plants to the Saran, Kantalia and 4 Gudha Reserves.

19. Care has been taken to select lands which have good deep soil, water near to the surface and perennial spring adjacent. The carriage of the plants to other Reserves from all these nurseries is very easy. This work will be taken in hand in the coming monsoon.

Selection of trees for the nurseries.

20. Such trees have been selected for nurseries as are hardy, suitable to the soil, fast growing, bearing light seeds or edible fruits. For instance in the saline and sandy soil of the Jodhpur Reserve Babul (*Acacia arabica*), Khejra (*Prosopis spicigera*), Arusa (*Ailanthus excelsa*), Sundhera (*Poinciana elata*), Nim (*Melia indica*), Ber (*Zizyphus xylopyra*) are the best.

21. In the Aravalli hills the growth of the best kind of trees now found in those forest will be encouraged and Kano (Olive), Sanatha (*Dodonaea viscosa*), Phulai (*Acacia modesta*). (These are the indigenous trees of the dry hills of the Salt Range of the Punjab), Sandal (*Santalum album*), Mohwa (*Bassia latifolia*), Teak (*Tectona grandis*) and Kali Siris (*Albizia odoratissima*) will be introduced. Sandal and Mohwa are noticed growing wild in some of the streams near Desuri and Bijapur. Teak is found, though scarce, in the Aravali hills of the Meywar (Oodeypur) State.

22. Out of the present crop of our forest the following trees will be encouraged:—

Jaman (*Eugenia jambolana*) Khair (*Acacia catechu*), Dalda (*Adina cordifolia*), Jajja (*Bauhinia racemosa*) Shisham (*Dalbergia latifolia* and *D. Sissoo*), the Indian Elm (*Ulmus integrifolia*), Godlia Jhau (*Anogeissus latifolia*), Lamkana (*Briedelia retusa*), Tibra (*Diospyros melanoxylon*), Aenla (*Phyllanthus emblica*), Aritha (*Sapindus emarginatus*), Kirmalia (*Cassia fistula*), Bahera (*Terminalia bellerica*), Belan (*Egle marmelos*), Bamboo (*Dendrocalamus strictus*).

Sowing and Planting.

23. An area of about 500 acres in the Jodhpur Reserve was sown with Phulai (*Acacia modesta*), Ber (*Zizyphus xylopyra*), Khejra (*Prosopis spiciqerna*), Sanatha (*Dodonaea viscosa*) and Babul (*Acacia arabica*) seeds in notches about 6 inches deep. The seed was sown with the first fall of rain. It germinated freely but there happened to be a long break in the rains and the seedlings were burnt down by the hot winds that followed, and the plumule had not sufficient strength to develop the taproot again. Those that survived this trial were eaten up by locusts that had been making ravages throughout the country during the hot months. Another area of about 14 acres was added to the old plantation at Jodhpur near the Railway Station this year and was planted with *sissoo* root cuttings, and *nim*, mulberry and gular seedlings. Blanks in the old plantation were filled in with *nim* seedlings and *sissoo* cuttings but as mentioned above suffered from the attacks of locusts. *Nim* seedlings were the only ones that escaped the injury. *Nim* seems to have an immunity from the attacks of all insects, locusts included.

24. Sadri Nursery.—No more sowings were made in this nursery but some of the seedlings which were growing too near each other were bedded out. The area in hand is already too small for the plants that grow in it. The object of starting this nursery was to establish a plantation close by but now as all the land round it has been cultivated by the criminal tribes, the plants shall have to be utilized to fill up the blanks in the neighbouring reserves.

25. The following statement shews the number and kinds of plants growing in each plantation:—

Species.	NAME OF PLANTATION.			
	JODHPUR.		SADRI.	
	No.	Area.	No.	Area.
Debul	900		81	
Kum	887		...	
Sawco	227		238	
Shis	71		...	
Jull	3		...	
Date	81		..	
Gular	8		...	
Bar	500		...	
Khejra	123	Acres	...	...
Kendal	...		8	
Gumra	10	40	...	
Shi uphal	10		...	
Nimba	9		...	
Pomegranate	8		...	
Gulmor	4		...	
Total	2,763		420	

Coppicing Operations.

26. Sufficient experience has been gained in British Merwara in ascertaining the coppicing power of the gregarious trees and shrubs that abound in the dry hills of Rajputana. The only treatment to grow straight boles out of stunted,

browsed and ill-shaped trees and shrubs of these forests is to coppice all the present stock. This will serve a double purpose; for it will bring revenue by sale of the coppice yield and turn the deformed trees into straight and sound wood. Hence an area of about 16 acres was marked and felled in the Sadri Block, leaving from 10 to 15 standards per acre. This area has been closed against grazing and grass cutting. The yield was supplied to the State for fuel used in the construction of the Sadri Baniha.

27. Two indents for good and sound timber received from the Commandant of the Erinpura Irregular Force were met with from the Nana Forest Block. The trees were felled after the selection method and the area was closed against grazing.

28. The coppice has been done in proper season and the stools well dressed. There is every hope that they will throw out vigorous shoots. Care has been taken not to cut the trees where the forest is sparse and the ground rocky and very precipitous.

Supply of Fodder grass to the public and the State.

29. At the time when the scarcity of grass was felt, the Department supplied about 2,193 maunds of grass to the Raj stables from the Jodhpur Reserve. Though this area was closed very late in the season and being close to the city was frequently trespassed on by the cattle of the town, yet it is satisfactory to note that the outturn of grass from such a small area was so abundant.

30. Although the cutting of *pili* (*Zizyphus nummularia* leaves) is extremely prejudicial to the development of vegetation in a country such as is found in the

vicinity of Jodhpur where even a blade of grass is most needful to cover the surface, to fix the sand and shelter the ground, yet out of sheer necessity this course was adopted. All the camels, milch cows and buffaloes live on *pālā*. The ber bushes are cut flush with the ground and leaves thrashed. The thorny branches are used for fencing. The Department supplied *pālā* valued at Rs. 2,412 to the Raj and public.

Establishment of a Depot at Jodhpur for timber, fodder and grass.

81. A depot has been established in the city where grass and *pālā* cut from the Jodhpur Reserve was kept and sold to the public. The sale of timber, charcoal and fuel imported from the Aravali Range is in contemplation.

Cattle pound.

82. As the young plants in the nurseries and plantations and the Reserve closed against grazing near Jodhpur were frequently damaged by cattle and camels, a cattle-pound was established during the early part of the year. Full pound fees were not charged from the owners but such an amount as would cover the feed and keep of the cattle impounded.

Financial Results.

83. The following statement briefly shews the result :—

	Rs.
Revenue received ...	732
Outstanding Revenue in favor of the year ...	4,047
Total ...	4,799
Saleable stock against the year	600
Total Revenue of the year ...	5,399
Expenditure ...	7,653
Deficit Rs. ...	2,254

84. It will be seen from the above that with the exception of Rs. 23

contributed by the forests of the Aravali Range, the revenue has been acquired by the sale of grass and palm, but it may be confidently hoped that when all is in working order, the forest will prove a source of profit instead of loss to the State.

Acknowledgment of help. 35. The Superintendent of Forests records with thanks the help received from Kalla Chatur Bhujjee, Superintendent of Land Revenue, in the organization of the Department and his hearty co-operation in all matters connected with forest conservancy.

36. The following statements are attached :—

A list of important trees, shrubs and creepers found in the forests of the Aravali Range.

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Annual Form No. 52.

FOREST DEPARTMENT, MARWAR STATE.

Area of Plantations, 1880-90.

Range.	Name of Plantation.	Area in Acres.				Receipts	Charges	Remarks.
		On 1st April 1880.	Added during the year.	Excluded during the year.	Area on 31st March 1890.	of the year.		
Jodhpur ...	Jodhpur ...	28	14	.....	42	.....	1,814	
Godhwar ...	Sadri ...	2	.....	.....	2	4-0-0	47	
	Total ...	30	14	.....	44	4	1,861	

Annual Form No. 54.

FOREST DEPARTMENT, MARWAR STATE.

Outturn (in cubic feet solid) of Timber and fuel during the year 1880-81 and Agency of Exploitation.

Rozes.	Timber in the Forest				Timber in Squared Timber.				Miscellaneous.				Fuel.				Total.				
	Log Agency.	Purchase.	Free grants.	Right holders.	Total.	Log Agency.	Purchase.	Free grants.	Right holders.	Total.	Log Agency.	Purchase.	Free grants.	Right holders.	Total.						
Gadwar
Jodhpur
Total

Annual Form No. 55.

FOREST DEPARTMENT, MARWAR STATE.

Outputs of Minor Forest Produce during the year 1889-90.

Division.	Description of Produce.	PRODUCE REMOVED OR UTILIZED.										REMARKS.			
		By Government Agency.		By Purchasers.		By Free Grants.		By Right-holders.		Total.					
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.				
	Bamboos (No.)	.....	Rs.	300	0	.....	Rs.	.....	...	.....	...	Rs.	300	0	
	Moyl grass (Cart loads).	.....	.....	26	13	.....	...	.....	...	.....	...	.....	26	13	
	Grass (Maunds)	.....	.....	1,770	1,408	.....	...	.....	...	.....	...	.....	1,770	1,408	
	Do. (Cart loads)	101	404	.....	.....	.....	...	.....	...	.....	...	.....	101	494	
	Pala (Ods)	1,103	222	11,080	2,100	.....	...	.....	...	.....	...	.....	12,813	2,412	
	Bithorus (No.)	.....	.....	120	32	.....	...	.....	...	.....	...	.....	120	32	Thorny fence.
	Total	.....	026	.....	3,040	.....	...	.....	...	.....	...	.....	.....	4,275	

Annual Form No. 56.

FOREST DEPARTMENT, MARWAR STATE.

Account of Timber and other Produce cut or collected by Raj agency and brought to Sale Depots or sold locally during the year 1889-90.

PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD.		PARTICULARS.	No. or quantity.	Cubic feet.	TOTAL OF EACH HEAD.	
			No. or quantity.	Cubic feet.				No. or quantity.	Cubic feet.
Balance at commencement of the year ...	...	...	...	...	Timber	...	...	...	...
Received during the year	...	...	...	...	Sold Locally	...	40	...	40
Timber ...	...	40	...	40	Gross and minor produce removed by purchaser from Depot	...	...	...	...
Gross in maunds ...	401	...	...	...	Gross in maunds	...	...	...	...
Paid (odds) ...	1,103	...	1,507	...	Paid (odds)	...	...	1,222	...
					Balance at close of the year—	...	...	...	...
					Gross in maunds	...	...	345	...
Total ...	...	...	1,507	40	Total	...	...	1,567	40

Annual Form No. 58.—(Continued.)

FOREST DEPARTMENT, MARWAR STATE.

Summary of Revenue of the Marwar State Forest during the year 1889-90.

Budget Heads.	Amount.			REMARKS.
	Rs.	A.	P.	
RECEIPTS.				
I.—Timber and other produce removed from the Forests by Raj Agency—				
(a) Timber	20	0	0	
(b) Firewood and charcoal ... ..	.....	...	...
(c) Bamboos ... ..	.....	...	...
(d) Grass and other minor produce	260	0	0	
II.—Timber and other produce removed from the Forests by Consumers or Purchasers—				
(a) Timber ... ..	.....	...	...
(b) Firewood and charcoal ... ..	.....	...	...
(c) Bamboos ... ..	.....	...	...
(d) Grazing and fodder grass	17	4	0	
(e) Other minor produce ... ..	.....	...	...
III.—Confiscated drift and waif wood—				
IV.—Revenue from Forest not managed by Raj—				
(a) Duty on Foreign Timber and other Forest Produce ... ..	.....	...	...
(b) Revenue from shared and private Forests ... ..	.....	...	...
V.—Miscellaneous—				
(a) Fines and forfeitures	434	0	0	It includes cat's pound fee.
(b) Refunds ... ..	.....	...	...
(c) Other sources ... ..	.....	...	...
Total	762	3	0	

FOREST DEPARTMENT, MARWAR STATE.

Summary of Expenditure of the Marwar State Forests during the year 1889-90.

Budget Heads.	Amount.			Remarks.
	Rs.	A.	P.	
A.—CONSERVANCY AND WORKS.				
I.—Timber and other produce removed from the Forests by Raj Agency—				
(a) Timber	4	0	0	
(b) Firewood and charcoal ... ..	.....	...	...
(c) Bamboos ... ..	.....	...	...
(d) Grass and other minor produce	120	2	0	
II.—Timber and other produce removed from the Forests by consumers or purchasers—				
III.—Confiscated drift and waif wood—				
IV.—Revenue from Forests not managed by Raj—				
(a) Duty on Foreign Timber and other Forest produce ... ..	.....	...	...
(b) Revenue from shared and private Forests	.....	...	...
V.—Rent of Leased Forests and payment to shareholders in Forests managed by Raj—				
VI.—Live-Stock stores Tools and Plant—				
(a) Purchase of cattle ... ..	.....	...	...
(b) Feed and keep of cattle ... ..	.....	...	...
(c) Purchase of stores Tools and Plants	68	12	0	
VII.—Communication and Buildings—				
(a) Roads and Bridges ... ..	.....	...	...
(b) Buildings	3	1	6	
(c) Other works ... ..	.....	...	...
VIII.—Demarcation improvement and Extension of Forests—				
(a) Demarcation ... ..	.....	...	...
(b) Compensation of Land and Rights ... ..	.....	...	...
(c) Surveys and Working Plans	4	14	0	
(d) Sowing and Planting	1,361	8	10	
(e) Protection from Fire ... ..	.....	...	...
(f) Other works	108	17	0	
IX.—Miscellaneous—				
(a) Refunds ... ..	.....	...	...
(b) Law charges ... ..	.....	...	...
(c) Other charges	314	6	0	
Total A. Conservancy and Works	1,084	4	7	

Annual Form No. 58.—(Concluded.)

FOREST DEPARTMENT, MARWAR STATE.

Summary of Expenditure of the Marwar State Forests during the year 1889-90.

Budget Heads.	Amount.			REMARKS.
	Rs.	A.	P.	
B.—ESTABLISHMENT.				
I.—Salaries—				
(a) Superior Establishment	1,770	0	0	
(b) Subordinate Executive and Protective Establishment	1,445	4	10	
(c) Office Establishment	643	15	11	
(d) Pensionary Contribution	200	0	0	
II.—Travelling Allowance—				
(a) Superior Establishment	837	10	0	
(b) Subordinate Executive and Protective Establishment	100	0	9	
(c) Office Establishment	150	2	9	
(d) Amount spent on the keep and feed of conveyance supplied by Raj... ..	300	0	0	
III.—Contingencies—				
(a) Stationary	48	9	0	
(b) Carriage of Tents and records	23	2	3	
(c) Rent Rates and Taxes	100	3	0	
(d) Official Postage	10	15	0	
(e) Sundries	21	14	0	
Total B. Establishment	5,008	15	3	
Total of Expenditure of Forest Conservancy	1,084	4	7	
Grand Total of Expenditure	7,533	3	10	

Annual Form No. 60.

FOREST DEPARTMENT, MARWAR STATE

Revenue received and outstanding on account of Revenue during the year 1889-90.

State.	Particulars.	Outstanding at the commencement of the year.			Value of sale and other revenue during the year.			Total.			Amount realized during the year.			Balance due to the Department at the end of the year.			Remarks.
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	
Marwar ..	.....	...	...	...	4,708	10	0	4,708	10	0	732	3	0	4,040	0	3	
		...	...	...	4,708	10	0	4,708	10	0	732	3	0	4,040	0	3	
	Total ...	...	...	...	4,708	10	0	4,708	10	0	732	3	0	4,040	0	3	

Annual Form No. 62.

FOREST DEPARTMENT, MAHAR STATE

Financial results of the year 1889-90.

State.	TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY RAJ AGENCY.		OTHER REVENUE.		FORESTATION AND IMPROVEMENT OF JOINTS.	TOTAL.		REMARKS.
	Receipts.	Charges.	Receipts.	Charges.		Receipts.	Charges.	
	Ra.	Ra.	Ra.	Rs.	Ra.	Ra.	Ra.	
Jaghpur ...	301	133	431	6,043	1,175	752	7,053	
Total ...	301	133	431	6,015	1,175	752	7,053	

*List of important trees, shrubs and creepers found in the Forests of the
North Range, Marwar State.*

Number.	Vernacular name.	Scientific name.	Remarks.
1	Ak	... <i>Crotogeomys</i> ...	
2	Am	... <i>Mangifera indica</i> ...	
3	Amaitas or Karmala	... <i>Cassia fistula</i> ...	
4	Amal	... <i>Phyllanthus emblica</i> ...	
5	Antia	... <i>Sapindus saponaria</i> ...	
6	Aray	... <i>Acacia leucophylla</i> ...	
7	Arvi	... <i>Chrysanthemum phlegmoides</i> ...	
8	Arvi	... <i>Albizia julibrissin</i> ...	
9	Arvi	... <i>Albizia julibrissin</i> ...	
10	Ata Phalan	... <i>Cassia julibrissin</i> ...	
11	Awal	... <i>Phyllanthus emblica</i> ...	
12	Babul	... <i>Acacia arabica</i> ...	
13	Bahera	... <i>Fernandus bahera</i> ...	
14	Bahera	... <i>Melastoma malabarium</i> ...	
15	Bans	... <i>Banksia laurifolia</i> ...	
16	Banoli or Bhūm Banoli	... <i>Acacia jacquemontii</i> ...	
17	Banoli	... <i>Crotogeomys</i> ...	
18	Belan or Bil	... <i>Terminalia tomentosa</i> ...	
19	Ber	... <i>Ziziphus nummularia</i> & <i>Z. xyloperga</i> and <i>Z. vulgaris</i> ...	
20	Bekhu Kaula	... <i>Martensia diandra</i> ...	
21	Bya or Byā	... <i>Pterocarpus Marsiprum</i> ...	
22	Bucta or Tambula	... <i>Chetia laevis</i> ...	
23	Chandan	... <i>Santalum album</i> ...	
24	Chirmi	... <i>Abrus precatorius</i> ...	
25	Chara	... See Khakra. ...	
26	Dāsan	... <i>Rhus myrsorensis</i> ...	
27	Dhamin Hasia	... <i>Grewia vestita</i> ...	

List of important trees, shrubs and creepers found in the Forests of the Aravali Range, Marwar State.—(Continued.)

Number.	Vernacular name.	Scientific name.	Remarks.
28	Dhakelan	... <i>Grewia villosa.</i>	
29	Dhari	... <i>Woodfordia floribunda.</i>	
30	Dhokra or Dhar (todlia)	... <i>Anogeissus latifolia.</i>	
31	" " India	... " <i>acuminata.</i>	
32	Dhokra or Dhan Kantia	... <i>Anogeissus pendula.</i>	
33	Farach	... <i>Tamarix articulata.</i>	
34	Farangri	... <i>Grewia pilosa.</i>	
35	Gangan	... " <i>pequillifolia.</i>	
36	Ghora Bel	... <i>Unica Superba</i> <i>Pueraria tuberosa</i>	
37	Ghoran	... <i>Capparis hirsuta.</i>	
38	Gomli	... <i>Cordia Rothii.</i>	
39	Gonda	... " <i>Nyssa.</i>	
40	Godichora	... <i>Erythrina suberosa.</i>	
41	Gol	... <i>Olina Wodier.</i>	
42	Gugal	... <i>Balanodendron Mukul.</i>	
...	Gular	... <i>Sec Umbri.</i>	
43	Haldia	... <i>Ailua cordifolia.</i>	
44	Hingota	... <i>Balanites aegyptiaca.</i>	
45	Imli	... <i>Tamarindus indica.</i>	
46	Jal	... <i>Salvadora persica.</i>	
47	Jaman	... <i>Eugenia Jambolana.</i>	
48	Jhan	... <i>Tamarix dioca.</i>	
49	Jinja	... <i>Dankinia racemosa.</i>	
50	Kadava	... <i>Anthocephalus kadamba.</i>	
...	Kagar	... <i>Acacia ferruginea.</i>	
51	Kamalai	... <i>Dichrostachys cinerea.</i>	
52	Kanaj	... <i>Ulmus integrifolia.</i>	
53	Kauldian	... <i>Rhus semialata.</i>	

*List of important trees, shrubs and creepers found in the Forests of the
Aravali Range, Marwar States - (Continued.)*

Number	Vernacular name.	Scientific name.	Remarks
54	Kutkura	... <i>Celastrus scaberrimus</i> .	
55	Kitaran	... <i>Capparis oppositifolia</i> .	
56	Ketraj	... <i>Croton salvifolius</i> .	
57	Kurr	... <i>Sterculia urens</i> .	
58	Kargra	... <i>Pouzosium salicifolium</i> .	
59	Karandus	... <i>Albizia Falcata</i> .	
60	Kari	... <i>Capparis aplylla</i> .	
61	Kat Jiraj	... <i>Ikigiuma malabarica</i> .	
62	Kawari	... <i>Salix tetragynus</i> .	
63	Kendri	... <i>Ficus virgata</i> .	
64	Khakra	... <i>Butea frondosa</i> .	
65	Khajia	... <i>Prosopis spicigera</i> .	
66	Kher	... <i>Acacia Catechu</i> .	
67	Khump or Bala	... <i>Periploca aphylla</i> .	
68	Khurai	... <i>Wrightia tinctoria</i> .	
...	Krumla	... See Mendal.	
70	Lankanna	... <i>Bisdolia retusa</i> .	
71	Lania	... <i>Hymenocallis on candelina</i> .	
72	Mabum or Mohua	... <i>Bassia latifolia</i> .	
73	Maror Phail	... <i>Helicteres Isora</i> .	
74	Mendal	... <i>Randia dumetorum</i> .	
75	Mokha	... <i>Schrebera swietenoides</i> .	
76	Nahar Kanta	... <i>Asparagus</i> .	
77	Naghar Thor	... <i>Opuntia Dillenii</i> .	
78	Negar	... <i>Vitax Negundo</i> .	
79	Xeel	... <i>Indigofera argentea</i> .	
80	Nimb	... <i>Melia indica</i> .	
81	Padal	... <i>Stereospermum suaveolens</i> .	

List of important trees, shrubs and creepers found in the Forests of the Aravali Range, Marwar State.—(Concluded.)

Number.	Vernacular name.	Scientific name.	REMARKS.
...	Palas	See Khakra.	
82	Paras Pipal	... <i>Ficus cordifolia</i> .	
83	Passi	... <i>Dalbergia lanceolaria</i> .	
...	Phalsa	... See Atia Dhaman.	
84	Phog	... <i>Colligonum polygonoides</i> .	
	...	... See Jál.	
		... <i>Ficus religiosa</i> .	
		... " <i>infectoria</i> .	
87	Itas	... <i>Clausena pontaphylla</i> .	
88	Rohan	... <i>Soyimda febrifuga</i> .	
89	Rohira	... <i>Tecoma undulata</i> .	
90	Salar	... <i>Boswellia thurifera</i> .	
91	Sandera	... <i>Poinciana elata</i> .	
92	Surgura or Sainjan	... <i>Moringa pterygosperma</i> .	
93	Salpan or Halpan	... <i>Securinea Leucopyrus</i> .	
94	Sembla	... <i>Bombax malabaricum</i> .	
95	Sewan	... <i>Gmelina arborea</i> .	
96	Siris Goris	... <i>Albizzia procera</i> .	
97	Siris Kalis	... " <i>Lebbek</i> .	
98	Shisham	... <i>Dalbergia latifolia</i> .	
99	Sitaphal	... <i>Anona squamosa</i> .	
...	Tambolia	... See No. 22.	
100	Tenda	... <i>Diospyros Melanoxylon</i> .	
101	Thor	... <i>Euphorbia Nivulia</i> .	
102	Tiharan or Bistadan	... <i>Diospyros montana</i> .	
103	Umbia	... <i>Saccopetalum tomentosum</i> .	
104	Umbri or Gular	... <i>Ficus glomerata</i> .	